

## **REMARKS/ARGUMENTS**

Claims 1-39 remain in this application. Claims 1 and 5 have been amended. The Examiner indicated that Claims 6-9, 16-7 and 23 contain patentable subject matter and would be allowable if re-written in independent form.

**Claims 1-5, 10-15, 18, 21-22, and 36-39 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by DiGiovanni et al.**

Applicant's claim 1 specified that the clad layer includes a plurality of annular segments that extend sequentially along the axis (this is shown schematically in illustration A, below) and that each segment has a density that is different from the density of the adjacent segment. (Also, see Applicants' Fig. 2) That is, the density of the clad varies along the axis of the waveguide. Therefore, to further clarify the original claim 1, applicants amended claim 1 to specify that "the clad layer comprising a plurality of annular segments, that extend sequentially along the axis and with densities that differ along the axis from one another". This feature is disclosed, for example, on pg. 12, lns. 15-19 of the Applicants' specification.

Claim 5 has been re-written in independent form and incorporates the subject matter of the original claims 1, 2 and 3. More specifically, claim 5 calls for an optical waveguide preform that includes a core layer and a clad layer. The clad layer comprises a plurality of annular segments that extend sequentially along the axis and with densities that differ along the axis from one another. The segments are characterized by a pre-selected density different from the pre-selected density of the segments immediately adjacent the each segment and each segment density is either higher or lower than both immediately adjacent segments. The segments, that have a pre-selected density lower than that of adjacent segments contain pores and the segments that have a pre-selected density higher than that of adjacent segments also contain pores, wherein the pores are elongated and have their long dimension oriented along the axis of the perform. This is disclosed, for example, on pg. 12, lns. 2-19 of the Applicants' specification.

These features are not disclosed by the DiGiovanni reference.

With respect to claims 11 and 12, applicants call for fluorine in the core. The cited reference discloses fluoride in the clad. (See, for example, col. 7, lns 24-25 of DiGiovanni et al).

With respect to claim 18, applicants specified that the “first and second dielectric constants differ by a factor of at least three.” This feature is not disclosed by the DiGiovanni reference.

With respect to rejected method claims (claims 36-39), the independent claim (claim 36) specifies that during the fiber draw a varying pressure be applied to the tube. This feature is not taught, disclosed, suggested or even implied by the DiGiovanni reference. The DiGiovanni device does not have any features that would make it obvious to one skilled in the art that it was made by method steps called for in claims 36-39.

In order for the reference to be an anticipatory reference, all claimed features have to be disclosed in that reference. Therefore, claims 1-5, 10-15, 18, 21-22 and 36-39 are not anticipated by DiGiovanni et al.

### **Claim Objections**

Applicants gratefully acknowledge Examiners indication that Claims 23-35 are contain patentable subject matter and that these claims would be allowable if rewritten in independent form. However, applicants respectfully submit that claim 23 is an independent claim. Therefore, claim 23 should be allowable. Claims 24-35 depend from claim 23, as their base claim. Therefore, claims 24-35 should also be allowable.

### **Conclusion**

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Applicants believe that no extension of time is necessary to make this Response timely. Should Applicants be in error, Applicants respectfully request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time

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extension or any other fees associated with this amendment to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Svetlana Z. Short at 607-974-0412.

Respectfully submitted,

DATE: \_\_\_\_\_

10/20/03

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